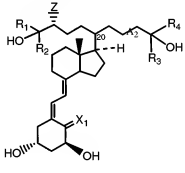
AMENDMENTS TO THE CLAIMS

Please amend claims 2 - 4, 9, 13, 15, 17 and 19 – 22, please cancel without prejudice or disclaimer claims 10 - 12 and 14, and please add claims 23 - 31. The following listing of claims will replace all prior versions, and listings, of the claims in the application.

1. (Cancelled)

2. (Currently amended) A method ~~of prevention or treatment of~~for preventing or treating overactive bladder ~~dysfunction~~ in a patient ~~by~~comprising administering to a patient in need thereof an effective amount of a Vitamin D_3 compound thereby ~~to prevent or treat~~preventing or treating overactive bladder ~~dysfunction~~ in said patient;

wherein the Vitamin D_3 compound is not a compound of formula



wherein:

X_1 is H_2 or CH_2;

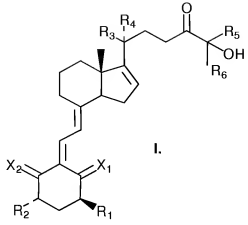
A_2 is a single, a double or a triple bond;

R_1, R_2, R_3 and R_4 are each independently C_1-C_4 alkyl, hydroxyalkyl, or fluoroalkyl;

Z is -OH, $-NH_2$ or -SH;

the configuration at C_{20} is R or S; or pharmaceutically acceptable esters, salts, and prodrugs thereof; and

wherein the Vitamin D_3 compound is not a compound of formula



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wherein:

X_1 and X_2 are each independently H_2 or CH_2, provided X_1 and X_2 are not both $=CH_2$;

R_1 and R_2 are each independently hydroxyl, $OC(O)C_1$-C_4 alkyl, OC(O)hydroxyalkyl or OC(O)haloalkyl, provided that R_1 and R_2 are not both hydroxyl;

R_3 and R_4 are each independently hydrogen, C_1-C_4 alkyl, hydroxyalkyl or haloalkyl or R_3 and R_4 taken together with C_{20} form C_3-C_6 cycloalkyl; and

R_5 and R_6 are each independently C_1-C_4 alkyl, hydroxyalkyl or haloalkyl; or pharmaceutically acceptable esters, salts, and prodrugs thereof.

Comment [AJ1]:

3. (Currently Amended) [A]The method according claim 2, which further comprises the step of obtaining or ~~synthesising~~synthesizing the Vitamin D_3 compound.

4. (Currently Amended) [A]The method according to claim 3, wherein the Vitamin D_3 compound is formulated in a pharmaceutical composition together with a pharmaceutically acceptable diluent or carrier.

5. (Cancelled)

6. (Cancelled)

7. (Wtihdrawn) A kit containing a Vitamin D compound together with instructions directing administration of the Vitamin D compound to a patient in need of prevention or treatment of bladder dysfunction thereby to prevent or treat bladder dysfunction in said patient.

8. (Withdrawn) A kit according to claim 7 wherein the Vitamin D compound is formulated in a pharmaceutical composition together with a pharmaceutically acceptable diluent or carrier.

9. (Currently Amended) The method according to claim 2, wherein said Vitamin D_3 compound is a Vitamin D receptor agonist.

Claims 10 - 12. (Cancelled)

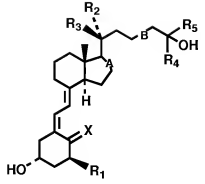
13. (Currently Amended) The method according to claim 2, wherein said patient is a male.

14. (Cancelled)

15. (Currently Amended) The method according to claim 2, wherein said patient is a female.

16. (Previously Presented) The method according to claim 2, wherein the patient is a human.

17. (Currently Amended) The method according to claim 2, wherein said vVitamin D_3 compound is a compound of the formula



[W]wherein:

X is H_2 or CH_2;

R_1 is hydrogen, hydroxy or fluorine;

R_2 is hydrogen or methyl;

R_3 is hydrogen or methyl[.], wherein ~~W~~when R_2 or R_3 is methyl, R_3 or R_2 must be hydrogen[.];

R_4 is methyl, ethyl or trifluoromethyl;

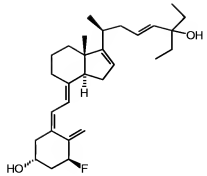
R_5 is methyl, ethyl or trifluoromethyl;

A is a single or double bond; and

B is a single, E-double, Z-double or triple bond.

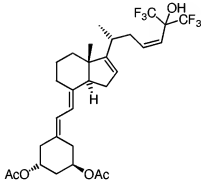
18. (Previously Presented) The method according to claim 17, wherein each of R_4 and R_5 is methyl or ethyl.

19. (Currently Amended) The method according to claim 18, wherein said Vitamin D_3 compound is 1-alpha-fluoro-25-hydroxy-16,23E-diene-26,27-bishomo-20-epi-cholecalciferol, having the formula:



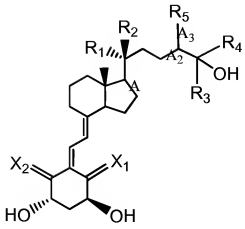
20. (Currently Amended) The method according to claim 2, wherein said Vitamin D_3 compound is 1,25-dihydroxy-16-ene-23-yne cholecalciferol.

21. (Currently Amended) The method according to claim 2, wherein said ~~v~~Vitamin D_3 compound is 1,3-di-O-acetyl-1,25-dihydroxy-16,23Z-diene-26,27-hexafluoro-19-nor-cholecalciferol, having the formula:



22. (Currently Amended) The method according to claim 2, wherein said ~~v~~Vitamin D_3 compound is calcitriol.

23. (New) The method according to claim 2, wherein said Vitamin D_3 compound is a compound of the formula



wherein:

X_1 and X_2 are H_2 or CH_2, wherein X_1 and X_2 are not CH_2 at the same time;

A is a single or double bond;

A_2 is a single, double or triple bond;

A_3 is a single or double bond;

R_1 and R_2 are hydrogen, C_1-C_4 alkyl or 4-hydroxy-4-methylpentyl, wherein R_1 and R_2 are not both hydrogen;

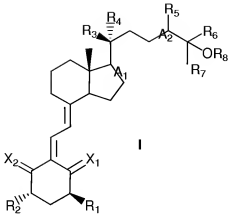
R_5 is hydrogen, H_2 or oxygen;

R_3 is C_1-C_4 alkyl, hydroxyalkyl or haloalkyl; and

R_4 is C_1-C_4 alkyl, hydroxyalkyl or haloalkyl.

24. (New) The method according to claim 23, wherein the compound is 1,25-dihydroxy-16-ene-23-yne cholecalciferol.

25. (New) The method according to claim 2, wherein said Vitamin D_3 compound is a compound of the formula



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A_1 is single or double bond;

A_2 is a single, double or triple bond;

X_1 and X_2 are each independently H_2 or CH_2, provided X_1 and X_2 are not both CH_2;

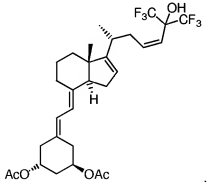
R_1 and R_2 are each independently $OC(O)C_1$-C_4 alkyl, OC(O)hydroxyalkyl or OC(O)haloalkyl;

R_3, R_4 and R_5 are each independently hydrogen, C_1-C_4 alkyl, hydroxyalkyl, or haloalkyl, or R_3 and R_4 taken together with C_{20} form C_3-C_6 cycloalkyl;

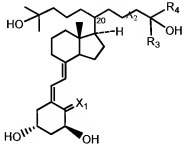
R_6 and R_7 are each independently $C_{1\text{-}4}$alkyl or haloalkyl; and

R_8 is H, -COC_1-C_4alkyl, -COhydroxyalkyl or -COhaloalkyl.

26. (New) The method according to claim 25, wherein the compound is 1,3-di-O-acetyl-1,25-dihydroxy-16,23Z-diene-26,27-hexafluoro-l9-nor-cholecalciferol:



27. (New) The method according to claim 2, wherein said Vitamin D_3 compound is a compound of the formula:



X_1 is H_2 or CH_2;

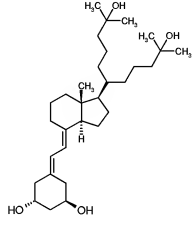
A_2 is a single, a double or a triple bond;

R_f is C_1-C_4 alkyl, hydroxyalkyl, or haloalkyl;

R_4 is C_1-C_4 alkyl, hydroxyalkyl or haloalkyl; and

the configuration at C_{20} is R or S.

28. (New) The method according to claim 27, wherein said vitamin D compound is 1,25-dihydroxy-21-(3-hydroxy-3-methylbutyl)-19-nor-cholecalciferol:



29. (New) The method according to claim 2, wherein said Vitamin D_3 compound is a compound of the formula:

1-alpha-fluoro-25-hydroxy-16,23E-diene-26,27-bishomo-20-epi-cholecalciferol;

1,25-Dihydroxy-21-(2R,3-dihydroxy-3-methyl-butyl)-20R-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-20-cyclopropyl-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-23-yne-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-23-yne-cholecalciferol;

1,25-Dihydroxy-16,23Z-diene-20-cyclopropyl-26,27-hexafluoro-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16,23Z-diene-26,27-hexafluoro-19-norcholecalciferol;

1,25-Dihydroxy-16,23E-diene-20-cyclopropyl-26,27-hexafluoro-cholecalciferol;

1,3,25-Tri-O-acetyl-1,25-dihydroxy-20-cyclopropyl-23-yne-26,27-hexafluoro-19-nor-cholecalciferol;

1,3-Di-O-acetyl -1,25-dihydroxy-20-cyclopropyl-23-yne-26,27-hexafluoro-19-nor-cholecalciferol;

1,25-dihydroxy-21(3-hydroxy-3-trifluoromethyl-4-trifluoro-butynyl)-26,27-hexadeutero-19-nor-20S-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16,23E-diene-cholecalciferol;

1,25-dihydroxy-16-ene-20-cyclopropyl-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-20-cyclopropyl-23-yne-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-24-keto-19-nor-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-20-cyclopropyl-23Z-ene-26,27-hexafluoro-l9-nor-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-l6-ene-23-yne-26,27-hexafluoro-cholecalciferol;

1,25-Dihydroxy-16-ene-20-cyclopropyl-23-yne-26,27-hexafluoro-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-l6-ene-l9-nor-cholecalciferol;

1,25-dihydroxy-21-(3-hydroxy-3-methylbutyl)-19-nor-cholecalciferol;

1,25-dihydroxy-21-(3-hydroxy-3-methylbutyl)-19-nor-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-23-yne-19-nor-cholecalciferol; or

1, 3-Di-O-acetyl-1,25-dihydroxy-20-cyclopropyl-23E-ene-26,27-hexafluoro-19-nor-cholecalciferol.

30. (New) The method according to claim 2, wherein said Vitamin D_3 compound is a compound of the formula:

1-alpha-fluoro-25-hydroxy-16,23E-diene-26,27-bishomo-20-epi-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-23-yne-cholecalciferol;

1,25-Dihydroxy-16,23E-diene-20-cyclopropyl-26,27-hexafluoro-cholecalciferol;

1,3-Di-O-acetyl -1,25-dihydroxy-20-cyclopropyl-23-yne-26,27-hexafluoro-19-nor-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16,23E-diene-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-23-yne-26,27-hexafluoro-cholecalciferol;

1,3-Di-O-acetyl-1,25-dihydroxy-16-ene-l9-nor-cholecalciferol; or

1, 3-Di-O-acetyl-1,25-dihydroxy-20-cyclopropyl-23E-ene-26,27-hexafluoro-19-nor-cholecalciferol.

31. (New) The method according to claim 2, wherein said Vitamin D_3 compound is calcitriol.